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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/767,641

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EXAMINER

OKEZIE, ESTHER O

ART UNIT

PAPER NUMBER

3652

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Technology Center 3600

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/767,641
Filing Date: January 29, 2004
Appellant(s): SCHMIERER ET AL.

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SEP 26 2006

GROUP 3600

Daniel J. Checkowsky
For Appellant

EXAMINER'S ANSWER

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner.

The rejections of claims 9,10,22, and 23 as being obvious under 35 U.S.C. 103 (a) over Boyd et al has been withdrawn.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,799,661	Boyd et al	9-1998
6,203,083	Reimann	3-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,5,6,11-17,24 are rejected under 35 U.S.C. 102(b) as being anticipated by Boyd et al.

Re claim 1, Boyd et al discloses a vacuum gripper (fig 33A) for suctioning workpieces comprising: a flexible suction body (192); a side of the suction body facing the workpiece including a sealing lip (200) bounding a vacuum chamber (194) and the vacuum chamber is connected by air flow to a vacuum connection; the suction body having a contact surface (198) abutting the workpiece with prevailing vacuum in the vacuum chamber and a microstructure (199; fig 33C) projecting from the contact surface and formed of one of rod, louver, and pin-shaped elements (col. 19, lines 1-11). The elements having a free end intersected by a longitudinal axis of the elements, the

Art Unit: 3652

free end being displaced away from the contact surface and the longitudinal axis oriented so as to intersect the contact surface (fig 33B; col. 19, lines 1-15).

It is noted that the microstructure of elements are meant only to be generally small and not microscopic in that the disclosure specifies the elements are to be between 0.1 and 1mm (10^{-3} meters) in length while a microscopic length would be 10^{-6} meters.

Re claim 2, the elements are part of a microstructure (fig 33C).

Re claim 5, the elements are disposed as one piece on the suction body (fig 33C)

Re claim 6, the elements are disposed on a carrier to be attached to the vacuum gripper (the pattern of bumps are disposed on the surface 198)

Re claim 11, wherein the elements have a rounded end (col. 19, lines 1-11).

Re claim 12, wherein the elements have a circular cross section (col. 19, lines 1-11).

Re claim 13, a blade plane for element with a flat cross section extends in the circumferential direction of the vacuum gripper (col. 19, lines 1-11).

Re claim 14, the elements project perpendicularly from the contact surface (fig. 33C).

Re claim 15, the sealing lip (200) is free of the elements (fig 33C).

Re claim 16, the elements extend over 70 to 95 percent of its radius, starting from the center of the vacuum gripper (fig. 33C).

Re claim 17, the length of the bumps is approximately 1mm (col. 19, line 5).

Art Unit: 3652

Re claim 24, the length of the bumps is approximately 1mm (col. 19, line 5).

Claim 18 rejected under 35 U.S.C. 102(b) as being anticipated by Reimann.

Re claim 18, Reimann discloses a method of producing a suction gripper having a flexible suction body (elastomeric insert 3) that includes a contact surface (5), the microstructure (9,10,11) formed of one of rod, louver, and pin-shaped elements, the method comprising the step of injection molding the suction body (col. 2, lines 31-40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3,4,7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd et al.

Re claims 3,4,8 while the suction cup is made from a soft, flexible elastomeric material (col. 18, lines 57-60), Boyd does not disclose the material from which the bumps are formed. The bumps are disclosed to create a reliable friction grip on the heart under vacuum without causing damage to the heart tissue and the soft flexible nature of suction cup manipulator (192) is disclosed to allow it to be folded or collapsed as it is pushed through an access port (col. 19, lines 23-29). This would suggest the

Art Unit: 3652

bumps also be flexible, not hard, to prevent damage during contact to with the heart tissue and collapse and folding of the entire suction cup. Therefore it would have been obvious to one of ordinary skill in the art to form the bumps from a soft, flexible, material such as plastic, rubber or any other elastomeric material in order to prevent damage during contact to with the heart tissue and permit collapse and folding of the entire suction cup.

Re claim 7, Boyd et al discloses an alternate embodiment including a high friction material cast on the surface of the suction cup serving as a film or layer of fabric (col. 19, lines 13-19).

(10) Response to Argument

Regarding claims 1,2,5,6, 11-17, and 24, Appellant argues that the Boyd references does not disclose orienting the longitudinal axis of bumps so as to intersect a free end of the bumps and contact surface.

In response, Claim 1 of the present application recites "a microstructure projecting from the contact surface and formed of one of a rod, louver, and pin-shaped element. Boyd discloses bumps that are in the shape of rods. Note col. 19, lines 1-11 where the bumps are defined as cylindrical. Therefore, since the limitations for the elements refer to pin-shaped elements the arguments are moot because Boyd discloses rod or cylindrical shaped bumps.

Regarding claims 1,2,5,6, 11-17, and 24, Appellant argues that the Boyd references is not analogous art because the current invention discloses a suction gripping device for facilitating the picking up and transporting of large metal or glass sheets having a smooth surface that may also be wet or oily.

In response, Claim 1 states "a vacuum gripper for suctioning workpieces". The additional descriptions of transporting large metal or glass sheets having a smooth surface that may also be wet or oily are not claimed. The Boyd reference discloses a vacuum device for gripping the surface of the heart (col. 18, lines 45-65).

Regarding claim 7, Appellant argues the Boyd references does not disclose a carrier that is one of a plate or film.

In response, Boyd discloses an absorbent high friction material adhesively attached to or cast into the distal surface of the suction cup in the form of a nonwoven layer of fabric serving as a plate or film (col. 19, lines 13-19).

Regarding claim 18, Appellant argues the Reimann reference does not disclose a method of producing a flexible suction body with the step of injection molding the suction body.

In response, the Reimann reference discloses the bearing member of the base body is cast or molded in and the rectangular grooves of the body are injection molded (col. 2, lines 23-40). These sections form the suction body of the device and are clearly formed by injection molding.

Art Unit: 3652

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

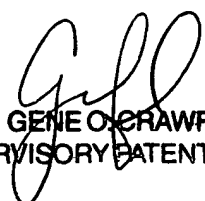
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Esther O. Okezie whose telephone number is (571) 272-8108. The examiner can normally be reached on Mon-Thurs 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen D. Lillis can be reached on (571) 272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EOO 9/15/06

Conferees: Eileen Lillis and Dean Kramer


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